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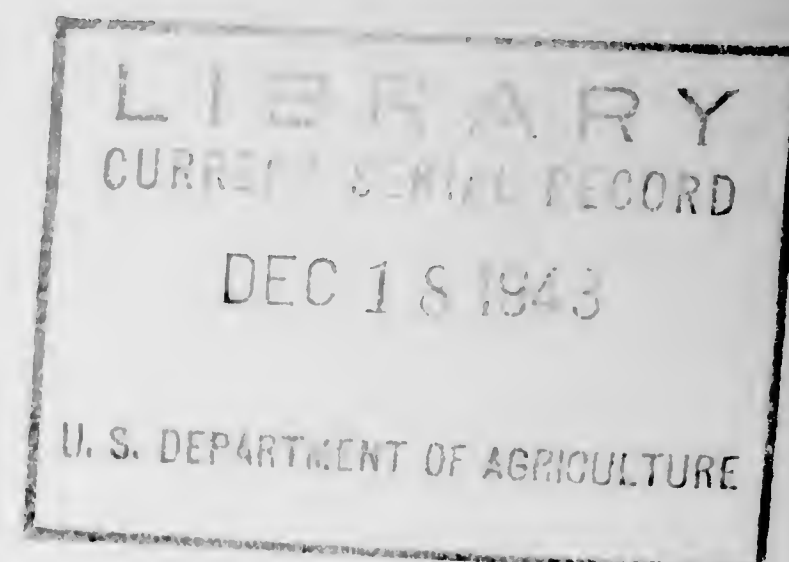
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THE GRADING OF CANNING CROPS

IN

P E N N S Y L V A N I A

1936

SEASON

* * * * *

Jas. L. States,
Acting Director

BUREAU OF MARKETS
PENNSYLVANIA DEPARTMENT OF AGRICULTURE

INV. '80

Commonwealth of Pennsylvania
Department of Agriculture
Harrisburg

D. M. James - R. R. Wilkinson
Bureau of Markets

THE GRADING OF CANNING CROPS IN PENNSYLVANIA

The production of fruits and vegetables for utilization by canning or processing plants has become the fastest growing agricultural industry in the Commonwealth of Pennsylvania. As recently as 1924, vegetables for canning were grown on only 7,740 acres of Pennsylvania's farm lands compared with the 29,450 acres thus utilized in 1936, an increase of 280% in 12 years. Likewise the volume of Pennsylvania grown fruits used for processing has increased rapidly in the same period. In addition Pennsylvania is particularly noted for its expanding mushroom canning industry, producing approximately 85% of the national supply of this food. Thus out of practically the unknown in the recent past, Pennsylvania suddenly looms forth as the 4th greatest canning State in the Union.

In reviewing the cannery products grading in the pages that follow, the steady growth of this standardization work is apparent. (See Table No. 1) Beginning with 235,000 lbs. of tomatoes graded at 3 stations in 1927, this work has grown to 135,103,349 pounds of apples, cherries, corn, peas, grapes, berries and tomatoes graded at 32 factories during 1936. This is a 31.5% increase over the 1935 season and a 310% increase over the 1933 season.

Probably the most significant feature of grading is in the fact that growers and canners are both benefited by it. Canners gain by lower cost of production and in higher quality of finished product. The growers receive greater income per ton and per acre for the canning crops they grow.

Table No. 1

| | <u>1936</u> | <u>1935</u> | <u>1934</u> | <u>1933</u> | <u>1932</u> |
|-------------|-------------|-------------|-------------|-------------|-------------|
| | (pounds) | (pounds) | (pounds) | (pounds) | (pounds) |
| Totals - | 135,103,349 | 102,734,348 | 74,920,373 | 46,715,964 | 68,696,624 |
| Apples - | 58,753,993 | 48,232,959 | 35,552,996 | 22,982,822 | 41,792,184 |
| Cherries - | 4,984,014 | 4,997,500 | 2,051,244 | 307,062 | 657,203 |
| Corn - | 1,619,647 | 1,193,172 | -- | -- | -- |
| Grapes - | 10,540,197 | 9,108,571 | 6,396,760 | 3,400,000 | 3,914,000 |
| Peas - | 1,009,381 | 1,044,326 | -- | -- | -- |
| Berries - | 343,680 | -- | 12,145 | 19,200 | -- |
| Gr. Beans - | -- | -- | -- | -- | 112,021 |
| Tomatoes - | 57,852,437 | 38,157,829 | 30,907,228 | 20,006,876 | 21,694,216 |

| | <u>1931</u> | <u>1930</u> | <u>1929</u> | <u>1928</u> | <u>1927</u> | |
|------------|-------------|-------------|-------------|-------------|-------------|-----------|
| | (pounds) | (pounds) | (pounds) | (pounds) | (pounds) | |
| 53,453,839 | 43,792,819 | 13,487,955 | 8,842,000 | 235,000 | - | Totals |
| 32,114,069 | 36,453,499 | 8,956,008 | 2,284,000 | -- | - | Apples |
| 2,479,124 | 2,710,000 | -- | -- | -- | - | Cherries |
| -- | -- | -- | -- | -- | - | Corn |
| 5,176,000 | 3,004,700 | 1,801,784 | 5,653,000 | -- | - | Grapes |
| -- | -- | -- | -- | -- | - | Peas |
| -- | -- | -- | -- | -- | - | Berries |
| 320,322 | 131,675 | 373,407 | -- | -- | - | Gr. Beans |
| 13,364,324 | 1,492,945 | 2,356,756 | 905,000 | 235,000 | - | Tomatoes |

BULK APPLE GRADING - 1936

For the seventh consecutive year a large part of the tonnage of apples purchased in the State for canning, were purchased on the basis of Federal grades. Six separate canneries in Adams and Franklin Counties used these grades all or part of the harvest season. In addition to canning stocks, apples delivered for sale as fresh were classified for grade at several packing houses.

Table 2, which follows, shows the percentage of barrelling apples, canning apples and ciders purchased in Pennsylvania since 1930. This table does not portray the quality of the entire Pennsylvania crop each year, but rather the quality of stock which is being purchased by the by-products plants. A large part of the "barrelling apples" listed were packed in barrels or baskets for sale as fresh fruits.

Table No. 2 - Average Classification of Pennsylvania Bulk Apples - 1930 - 1936

| Grades | 1936 | 1935 | 1934 | 1933 | 1932 | 1931 | 1930 |
|---|------|------|------|------|------|------|------|
| BARRELLING APPLES (U. S. No. 1 and Commercial) | % | % | % | % | % | % | % |
| | 43 | 25 | 23 | 23 | 13 | 36 | 28 |
| CANNING APPLES (Cannery No. 1 and No. 2) | 44 | 63 | 70 | 66 | 72 | 41 | 54 |
| CIDER APPLES | 13 | 12 | 7 | 11 | 15 | 23 | 18 |

* * * * *

TOMATO GRADING

The tenth season of tomato grading in Pennsylvania showed an increase of approximately 52% over the 1935 tonnage and 87% increase over the 1934 tonnage. In addition 3,838 acres of tomatoes from counties in eastern Pennsylvania were Federal-State inspected at a New Jersey cannery.

Inspectors were located at the following cannery receiving points in Pennsylvania:

| | |
|-----------------------------|-------------------|
| Bloomsburg Packing Company | Bloomsburg, Pa. |
| Burgoon & Yingling | Gettysburg, Pa. |
| Campbell Soup Company | Lancaster, Pa. |
| Greencastle Packing Company | Greencastle, Pa. |
| Hanover Canning Company | Hanover, Pa. |
| Lineboro Canning Company | Lineboro, Md. |
| C. H. Musselman Company | Biglerville, Pa. |
| Myers Canning Company | Spring Grove, Pa. |
| North East Preserving Works | North East, Pa. |
| North East Preserving Works | Girard, Pa. |
| Shenk & Bowman | Newville, Pa. |
| G. Bartol Silver | Christiana, Pa. |
| Welch Grape Juice Company | North East, Pa. |

* * * * *

- 5 -

Table No. 3, shows the improved quality of tomatoes delivered to canneries in Pennsylvania during the 1936 season over past seasons.

Table No. 3 - Classification of Graded Tomatoes in Pennsylvania - 1927 - 1936
(Weighted Average Percent)

| | 1936 | 1935 | 1934 | 1933 | 1932 | 1931 | 1930 | 1929 | 1928 | 1927 |
|-------------|------|------|------|------|------|------|------|------|------|------|
| U. S. No. 1 | 76 | 61 | 61 | 51 | 52 | 46 | 42 | 54 | 41 | 51 |
| U. S. No. 2 | 22 | 35 | 34 | 43 | 43 | 45 | 54 | 42 | 51 | 39 |
| Culls | 2 | 4 | 5 | 6 | 5 | 9 | 4 | 4 | 8 | 10 |

Note: Figures for 1934, 1935 and 1936 do not include several canneries purchasing on basis of U. S. Standards for Strained Tomato Products.

* * * * *

Table No. 4 - Comparison of Tomato Inspection in 12 States - (1936 Season)

| | Tons Inspected | Percent U. S. No. 1 | Percent U. S. No. 2 | Percent Culls |
|-------------------|-------------------|------------------------|------------------------|------------------|
| State A | 7,941 | 65 | 29 | 6 |
| " B | 26,544 | 58 | 39 | 3 |
| " C | 118,447 | 65 | 32 | 3 |
| " D | 8,300 | 55 | 40 | 5 |
| " E | 183,027 | 64 | 33 | 3 |
| " F | 88,657 | 67 | 31 | 2 |
| " G | 76,296 | 71 | 24 | 5 |
| " H | 1,020 | 79 | 18 | 3 |
| " I | 50,807 | 64 | 32 | 4 |
| " J | 195 | 61 | 35 | 4 |
| PENNSYLVANIA | 28,000 | 76 | 22 | 2 |
| 12 STATES AVERAGE | | 66 | 30 | 4 |

* * * * *

Table No. 5 shows the average grading at Pennsylvania canneries in 1936, prices paid for No. 1's and No. 2's and average season prices paid. The average price received by Pennsylvania tomato growers selling on the grade basis was \$14.84 a ton compared to an average price of \$12.73 a ton for Pennsylvania tomatoes sold flat rate. Last year the average graded price was \$14.12 a ton and the average flat price was \$11.70 a ton.

Table No. 5 Season Average Classification 1936 Prices Paid per Ton for U. S. No. 1 and U. S. No. 2 Tomatoes and Season Average at Pennsylvania Canneries - 1936

| | U.S. No. 1 | U.S. No. 2 | Culls | U.S. No. 1 | U.S. No. 2 | Average |
|-------------|------------|------------|-------|------------|------------|---------|
| Cannery A | 66% | 31% | 3% | \$14.00 | \$6.00 | \$11.10 |
| " B | 73 | 19 | 8 | 15.00 | 10.00 | 12.85 |
| " C | 73 | 21 | 6 | 18.00 | 10.00 | 15.04 |
| " D | 68 | 30 | 2 | 16.00 | 10.00 | 13.88 |
| " E | 60 | 37 | 3 | 16.00 | 10.00 | 13.30 |
| " F | 72 | 27 | 1 | 17.00 | 10.00 | 14.94 |
| " G | 66 | 31 | 3 | 15.00 | 10.00 | 13.00 |
| " H | 82 | 17 | 1 | 16.00 | 8.00 | 14.48 |
| " I | 64 | 34 | 2 | 17.00 | 10.00 | 14.28 |
| " J | 64 | 33 | 3 | 16.00 | 9.00 | 13.23 |
| " K | 69 | 28 | 3 | 19.00 | 10.00 | 15.91 |
| PA. AVERAGE | 76 | 22 | 2 | 17.00 | 9.00 | 14.84* |

*Includes price received for Pennsylvania-grown tomatoes delivered to N. J. cannery.

This table does not include three plants that purchased No. 1 and No. 2 tomatoes at an equal rate.

TEN-TON TOMATO CLUB RECORDS - 1936

Ten-Ton Tomato Clubs were organized in Pennsylvania by the Extension Service of State College in 1935. The results the first year with 44 members in the State were most gratifying compared with the 276 for 1936 which was far above expectation. These results show that some sections of Pennsylvania are well adapted to the growing of high yields of tomatoes. The following records are reported through the courtesy of the author, J. M. Huffington, Division of Extension, The Pennsylvania State College.

Distribution

| By Counties - | Total ----- | 276 |
|----------------|------------------|-----|
| Adams - 3 | Franklin - | 10 |
| Bucks - 41 | Lancaster - | 189 |
| Chester - 9 | Northumberland - | 3 |
| Columbia - 2 | Philadelphia - | 1 |
| Cumberland - 6 | Union - | 1 |
| Delaware - 5 | York - | 6 |

Fertilizer

270 out of 276 applied commercial fertilizer, 500 to 1,000 pounds used. 65% broadcast before planting; 35% sowed fertilizer in the row before or at time of planting; 7% only top dressed after planting and remaining 3% used broadcast and row method combined. Manure used on 58% farms with application equivalent to 10 tons per acre.

Plants

Home-grown plants used on 124 farms, southern plants on 128 farms. Varieties: Marglobe on 90 farms; Baltimore -34, Rutgers - 13, Bonny Best - 2, Pritchard - 1, and Penn State - 1.

Planting

65% were planted May 15 to 31st, 19% from June 1st to 5th, 9% before May 15th and 7% were set after June 5th.

The amount of space allowed by 72% was 14 to 20 square feet and more frequently 16 to 20, the other 28% allowed 10 to 13 square feet.

Cultivation

49% cultivated 4 to 5 times, 35% - 6 to 7 times, 16% - 2 to 3 times. 58% weeded by hand.

Rotation - Soil Type and Preparation

Most common rotation was sod in 1934 (67% of fields) Corn in 1935 (70% of fields) and tomatoes in 1936.

Plowing was done before April 15th by over half (57% on 262 farms) of the growers.

Ground disced and harrowed 3 to 4 times on 53% of 265 farms.

The largest number of 10-ton yields were produced on medium to heavy soils as follows: medium - 168, clay loam - 65 and sandy loam - 30.

COST ACCOUNT RECORDS FOR 264 10-TON GROWERS

| | |
|-------------------------------------|---------|
| Number of Records | 264 |
| Number of Acres | 1219.39 |
| Manure tons (average) | 8.37 |
| Fertilizer lbs. (average) | 7.01 |
| Yield (tons) | 12.45 |

| | |
|---|-------|
| Cost of: | |
| Plants | 7.50 |
| Interest, depreciation, taxes | 9.28 |
| Spray materials | .85 |
| Fertilizer | 10.16 |
| Manure | 6.28 |
| Labor growing | 22.33 |

Total Growing Cost . . . \$56.40

| | |
|-----------------------------|-------|
| Picking | 32.79 |
| Trucking to plant | 22.43 |

Total Harvesting Cost . . \$55.22

Average Total Cost per Acres . . \$111.62
Average Cost per Ton 8.97
Average Total Receipts per acre . . 177.32

CORN GRADING

The second season of corn grading was carried on at Columbia County Cannery with 1,619,647 barrels inspected. This corn sold for \$14.40 a ton compared with \$11.90 received for ungraded corn in the State in 1936. The 613 loads delivered graded 81% - No. 1, 15% - No. 2 and 4% Culls.

PEA GRADING

Grading of peas at a Pennsylvania cannery on the basis of Pennsylvania grades - Fancy, Extra Standard and Standard totaled 1,009,381 pounds.

53% graded Fancy
30% graded Extra Standard
17% graded Standard

The average price growers received for graded peas was \$63.41 compared to \$48.75 received for ungraded peas.

CHERRY GRADING

The volume of cherries purchased on the basis of grades in Pennsylvania during 1936 was slightly lower than in 1935 due to the short crop of sour cherries. Practically all cherries being purchased by canners and cold-packers in the state are being bought under the Federal grades. The 1936 crop averaged 93% U. S. No. 1, 7% culls.

GRAPE GRADING FOR JUICE PURPOSES

The season of 1936 marked the eighth consecutive year that Pennsylvania grape growers have marketed their grapes to juice plants under Federal grades. The tonnage in 1936 reached an all time high at 10,540,197 pounds, nearly 1½ million pound higher than in 1935.

The manufacturers contract with the growers for U. S. No. 1 juice grapes with certain requirements waived, such as split berries and straggly bunches. The net returns to the grape growers are usually higher than the returns received from carlot or truck sales, since expense of packing, selling and cost of containers are eliminated in selling to the processors.

SUPERVISION AND COST OF CANNERY PRODUCTS INSPECTION

This is a self supporting service under state supervision. All Inspectors are trained and licensed by the Bureau of Markets and may be secured

through the Federal-State Inspection Fund, care Bureau of Markets, Harrisburg, Pennsylvania. During 1936 the gross cost of each inspection amounted to \$42.00 a week. From this amount \$3.00 a week was paid to the State Treasury in lieu of the expenses of state supervision. The balance, (\$39.00) was used to pay inspectors' wages and other expenses such as compensation insurance, bonding fee for treasurer, and minor charges. A small balance left in the Federal-State Fund at the close of the season is retained to meet the contingency of paying reporting expenses of inspectors.

During 1936 the average cost of inspecting 135 million pounds of cannery products amounted to 12¢ a ton, compared to 11½¢ in 1935, 13-2/3¢ in 1934, 12-2/3¢ in 1933, 18¢ in 1932, 16¢ in 1931. At large plants the cost is considerably lower because of heavy tonnage. Where the volume is light, the cost per ton is necessarily greater.

Additional copies of this report or further information regarding this grading service will be furnished upon request. Applications for inspectors should be addressed to Federal-State Inspection Service, Bureau of Markets, Harrisburg, Pennsylvania.

Because of numerous requests received by the Department of Agriculture, the following list of 1936 canners is attached to this report.

* * * * *

APPLE PRODUCTS

| | | | |
|----------------------------|--------------|-------------------------|--------------|
| Adams Apple Products Corp. | Aspers | Littlestown Canning Co. | Littlestown |
| American Preserve Co. | Philadelphia | Lum Packing Co. | Chambersburg |
| Cruikshand Bros. Co. | Pittsburgh | Lutz & Schramm Co. | Pittsburgh |
| Greencastle Packing Co. | Greencastle | Musselman Co., C. H. | Biglerville |
| Heinz Co., H. J. | Pittsburgh | Orrtanna Canning Co. | Orrtanna |
| Knouse Corporation | Peach Glen | South Mountain Cannery | Orrtanna |

CHERRIES

| | | | |
|------------------------------|----------------|------------------------|----------|
| Bollinger & Sons, Samuel | Porters Siding | | |
| Musselman Co., C. H. | Biglerville | Orrtanna Canning Co. | Orrtanna |
| North East Pres. Works, Inc. | North East | South Mountain Cannery | Orrtanna |

CORN

| | | | |
|-------------------------|---------------|----------------------------|-------------|
| Bloomsburg Packing Co. | Bloomsburg | New Oxford Canning Co. | New Oxford |
| Chandlee, I. W. | Delta | Procter, S. Edward | Delta |
| Codorus Canning Co. | Codorus | Riggins Canning Co. | Glen Mills |
| Farmers Canning Co. | Felton, RD #2 | Ruff, Edw. G. | Delta |
| Fife, S. M. | Airville | Ruff, H. M. | Woodbine |
| Flinchbaugh & Leber | Red Lion | Scarborough, Jr., C. Parke | Delta |
| Gehman, N. H. | Ephrata | Shriver Co., B. F. | Littlestown |
| Gemmill, J. T. | High Rock | Silver & Son, Chas. B. | Christiana |
| Greencastle Packing Co. | Greencastle | Silver, W. Scott | Nottingham |
| Hyson & Son, R. B. | Bridgeton | Smith, Geo. L. | New Park |
| King & Son, Wm. P. | Peach Bottom | Smith, Jas. T. | Fawn Grove |
| Kingsdale Canning Co. | Littlestown | Snyder & Co., R. D. | Delta |
| Littlestown Canning Co. | Littlestown | Summers, Jr., Chas. G. | New Freedom |
| | | Winebrenner Co., D. E. | Hanover |

TOMATOES

| | | | |
|----------------------------|----------------|------------------------------|--------------|
| Anderson & Son, J. H. | Woodbine | Keyport Bros. | High Rock |
| Bloomsburg Packing Co. | Bloomsburg | Littlestown Canning Co. | Littlestown |
| Bollinger & Sons, Samuel | Porters Siding | Matthias, O. M. | Littlestown |
| Burgoon & Yingling | Gettysburg | Melrose Canning Co. | Hanover |
| Chanceford Pkg. Co. | High Rock | Menges, Wm. | Kingsdale |
| Chandlee, I. W. | Delta | Miller Canning Co. | Monroetown |
| Cruikshank Bros. Co. | Pittsburgh | Morrow, G. B. | Roxbury |
| Eby & Sons, F. L. | Littlestown | Musselman Co., C. H. | Biglerville |
| Farmers Canning Co. | Felton, RD #2 | Myers Canning Co. | Spring Grove |
| Fife, S. M. | Airville | North East Pres. Works, Inc. | North East |
| Flinchbaugh & Leber | Red Lion | Penns Manor Canning Co. | Bristol |
| Gehman, N. H. | Ephrata | Pcmraning & Son, W. B. | Delta |
| Gemmill, J. T. | High Rock | Quarryville Canning Co. | Hanover |
| Girard Canning Co. | North Girard | Scarborough, Jr., C. Parke | Delta |
| Greencastle Packing Co. | Greencastle | Shenk & Bowman | Newville |
| Hanover Canning Co. | Hanover | Shriver Co., B. F. | Littlestown |
| Heinz Co., H. J. | Pittsburgh | Riggins Canning Co. | Glen Mills |
| Hillsboro-Queen Anne Corp. | Bloomsburg | Ruff, H. M. | Woodbine |
| Hungerford Packing Co. | Hungerford | Saulsbury Canning Co. | Hanover |
| Silver & Son, Chas. B. | Christiana | Summers, Jr., Chas. G. | New Freedom |
| Snyder & Co., R. D. | Delta | Whitaker Co., H. E. | Philadelphia |
| | | Winebrenner Co., D. E. | Hanover |

PEAS

| | | | |
|----------------------------|--------------|-----------------------------|-------------|
| Bloomsburg Pkg. Co. | Bloomsburg | New Oxford Canning Co. | New Oxford |
| Burgoon & Yingling | Gettysburg | North East Pres. Works Inc. | North East |
| Greencastle Packing Co. | Greencastle | Ruff, Edw. G. | Delta |
| Hanover Canning Co. | Hanover | Ruff, H. M. | Woodbine |
| Hillsboro-Queen Anne Corp. | Bloomsburg | Saulsbury Canning Co. | Hanover |
| Kingsdale Canning Co. | Littlestown | Shriver Co., B. F. | Littlestown |
| Littlestown Canning Co. | Littlestown | Silver & Son, Chas. B. | Christiana |
| Marrow, G. B. | Roxbury | Summers, Jr., Chas. G. | New Freedom |
| Myers Canning Co. | Spring Grove | Winebrenner Co., D. E. | Hanover |

BEANS

| | | | |
|--------------------------|----------------|------------------------------|--------------|
| Bollinger & Sons, Samuel | Porters Siding | Morrow, G. B. | Roxbury |
| Burgoon & Yingling | Gettysburg | Myers Canning Co. | Spring Grove |
| Chanceford Pkg. Co. | High Rock | New Oxford Canning Co. | New Oxford |
| Codorus Canning Co. | Codorus | North East Pres. Works, Inc. | North East |
| Flinchbaugh & Leber | Red Lion | Riggins Canning Co. | Glen Mills |
| Gemmill, J. T. | High Rock | Ruff, Edw. G. | Delta |
| Greencastle Packing Co. | Greencastle | Ruff, H. M. | Woodbine |
| Hanover Canning Co. | Hanover | Shenk & Bowman | Newville |
| Hungerford Packing Co. | Hungerford | Silver & Son, Chas. B. | Christiana |
| Knouse Corporation | Peach Glen | Summers, Jr., Chas. G. | New Freedom |
| Littlestown Canning Co. | Littlestown | Winebrenner Co., D. E. | Hanover |

MUSHROOMS

| | | | |
|-----------------------------|--------------|----------------------------|-------------|
| Brandywine Mushroom Corp. | West Chester | Mushroom Coop. Canning Co. | Kennett Sq. |
| Concord Foods, Inc. | Ward | Standard Mushroom Co. | Pomeroy |
| Grocery Products Mfg. Corp. | West Chester | Superior Canning Co. | Avondale |
| Keystone Mushroom Co. | Coatesville | | |

END OF YEAR